

Claims

1. A method of monitoring a pulley and belt assembly, comprising the steps of applying an external excitation to a span of the belt, detecting  
5 vibrations of the said span and/or of another span or spans of the belt, and identifying from said detected vibrations the resonant frequency of one or more of the belt spans, whereby to derive information about the condition of the belt and/or a pulley or pulleys in the assembly.
- 10 2. A method as claimed in claim 1 and further including the step of comparing the vibrations detected both before and after application of said external excitation.
- 15 3. A method as claimed in claim 1 or claim 2 and further including the step of comparing the vibrations detected in two or more spans of the belt.
4. A method as claimed in any preceding claim wherein said external excitation is applied repeatedly at a chosen frequency.
- 20 5. A method as claimed in any preceding claim in which the resonant frequency of a belt span is identified and used to give an indication of the belt tension in said span.
- 25 6. Apparatus for monitoring a pulley and belt assembly, comprising means for imparting an external excitation to a span of the belt, means for detecting vibrations in the said span and/or in another span or spans of the belt, and means for identifying from said detected vibrations the resonant frequency of one or more of the belt spans, whereby to derive information about the condition of the belt and/or a pulley or pulleys in the assembly.